

Part 2 – Remarks

This Amendment and Response is responsive to the Office Action mailed August 22, 2006. A Petition for Three Month Extension of Time and the fee therefor accompanies this Amendment and Response, thereby extending the time for response to February 22, 2007.

In the August 22 Office Action, claims 1-4, 34-37, 40, 42-44, 66, and 67 were rejected under 35 USC 102(b) as anticipated by US patent 6,175,610 to Peter; claims 5-15, 39, 41, 46-52 and 54-56 were rejected under 35 USC 103(a) as obvious from Peter in view of US patent 6,710,770 to Tomasi; claims 16-21, 38, 45, 53 and 57 were rejected under 35 USC 103(a) as obvious from Peter and Tomasi in view of US patent 6,266,048 to Carau; and no understandable rejection was stated with respect to claims 22-33, 58-65 and 68.

Reconsideration of these rejections is respectfully requested, in view of the above amendments and these remarks.

Claims 1, 3-8, 10-20, 22-28, 32-34, 36-39, 42-65 and 69-72 are now pending.

Claim Amendments and New Claims

The subject matter from the canceled claims has been incorporated in the pending claims in the manner set forth above.

The claims have been amended to correct minor discrepancies and to otherwise improve their form, in the manner set forth.

The claims have been amended to recite “contact” interrogation with the image on the display surface. Contact interrogation is described in the specification at page 9, lines 4-9, page 11, lines 18-21, page 14, lines 8-12, and even more specifically at page 14, lines 21-26.

Claims 12, 15, 69 and 71 have been amended to clarify the disposable nature of the virtual control panel. The August 22 office action takes the position that “everything in the whole world is disposable.” [Page 6, fifth bullet paragraph]. This is certainly not the meaning of disposable in the context of medical products and this invention. The amendments to claims 12, 15, 69 and 71 make it clear that the disposability is in relation to use at a surgical site in a medical procedure, and not to ultimate disposition

of everything, as is readily understood from the description in the specification at page 15, line 24 to page 17, line 30, and specifically at page 17, lines 26-30.

New claims 69-72 duplicate the subject matter of original claims 12, 11, 12 and 3, respectively.

No new matter has been added by the amendments or the new claims.

Anticipation Rejection

The US patent to Peter is alleged to anticipate all of the independent claims. It is respectfully submitted that Peter does not disclose the subject matter of the pending claims, and therefore the anticipation rejection is erroneous.

The pending claims recite, in the manner set forth, an electrosurgical generator having a virtual control panel for controlling the functionality of the electrosurgical generator (claim 1), or a virtual control panel for use with an electrosurgical generator to control its functionality (claim 34), or a method of controlling an electrosurgical generator by use of a control panel image (claim 42). The Peter patent does not describe an electrosurgical generator. Peter describes x-ray CT apparatus (column 3, lines 3 and 33) which is housed within a singular room dedicated to that equipment. Peter also mentions medical systems in general, but describes such systems in the context of a room with projectors extending from the ceiling, displays located about the room, and a cameras also located on the ceiling.

An x-ray CT apparatus or a general medical system that consumes an entire room is not an electrosurgical generator. An electrosurgical generator is a specific type of medical device, described generally at page 1, of line 18-page 2, line 2. Electrosurgical generators are well known in the art as a specific type of medical device which applies high-frequency high-voltage electrical current to tissue during a surgical procedure. Peter does not disclose an electrosurgical generator.

All of the independent claims recite, in the manner set forth, that contact of an object with the control panel image is optically interrogated, and that contact interaction is the basis for the interaction signal supplied to control the generator controller and hence to control the functionality of the electrosurgical generator itself.

The Peter patent does not interrogate contact interaction with the control panel image. Peter interrogates the position or movement of the surgeon's hand or finger above the image. So long as the hand or finger is at a specific position above the image, and remains there for a specific amount of time, Peter recognizes this as valid input for controlling the x-ray equipment. There are finger troughs or recesses and projections or raised areas on the surface upon which Peter projects the image, but these raised areas and recesses are for the practitioner's convenience in registering or aligning his/her finger with the appropriate control area of the image so its presence at the appropriate location will be correctly recognized. See column 6, lines 9-13. However, there is no interrogation of contact with the surface upon which the image is located, in Peter.

The inability of Peter to interrogate actual contact with the control panel image is explained in column 4, lines 1-15. Peter analogizes the situation to positioning the cursor with a mouse of a computer, and then clicking the mouse by leaving the cursor at the position for a predetermined time. In other words, Peter's activity is entirely two-dimensional, in the nature of casting a shadow, and not three-dimensional as is involved in interrogating contact with the control panel image surface as is recited more specifically in the pending claims.

The optical triangulation technique described in the connection with Fig. 3 in the application achieves the contact interrogation and offers considerable advantages in reliability over the two-dimensional shadow recognition system described in Peter. The contact interrogation by optical triangulation is described in the present specification at page 12, line 3 to page 14, line 23, and in Fig. 3. Nothing in Peter describes or suggests such a contact interrogation arrangement.

The significance of contact interrogation of the control panel image is that a very reliable indication of a control action is obtained. The holographic control system described in the application at page 4, line 3, and the shadow recognition system described in Peter, are subject to unintended operation if someone accidentally moves his/her hand through the holographic image or moves his/her hand or some object above the control panel to create a shadow. Contact interrogation provides the

reliability of a specific physically-defined control input, i.e. contact, having essentially the same reliability as resulting from pushing a button or moving a switch.

Further still, apparatus claims 1 and 34, and their dependent claims, recite in the manner set forth that the sensor is connected to the display surface structure which has the display surface upon which the control panel image is located. Method claim 42, and its dependent claims, recite in the manner set forth that the optical interrogation of the contact control area for contact interaction occurs at the display surface structure. Peter does not anticipate these claimed features. Peter's camera is clear across the room from the display surface structure upon which an image may be presented. Peter's camera is not connected to the display surface, and cannot optically interrogate at the display surface structure.

The significance of these improvements is that it is possible to distinguish between smaller contact control areas of the control panel image, when the sensor is closer to the contact control areas of the image. Furthermore, there is greater reliability of accurately interrogating contact interaction when the sensor is located close to the contact control areas of the image which are contacted. Distinguishing between contact control areas which are a finger-width apart, as would be typical of a conventional control panel, would be very difficult and probably unreliable with the camera clear across the room on the ceiling, which is the case with Peter.

Those dependent claims which recite the projector also require it to be connected to the display surface structure. Similar reasoning applies to the projector in that the projected contact control areas are more readily definable, and the contact interaction with its projected image is more readily interrogated, due to the closer position and the more close interaction between the projected image and the position of contact with the image on the display surface. Many other features of the dependent claims are also not disclosed in Peter.

The significant advantages and improvements available from the claimed invention are described in the application at page 9, lines 12-19; page 11, line 22 to page 12, line 5; page 15, lines 13-24; page 17, lines 21-30; page 20, line 23 to page 21,

line 27; and page 14, lines 1-28; among others – all taken in relation to the background described at page 1, line 18 to page 5, line 5.

For a valid anticipation rejection, the allegedly anticipating reference must describe exactly all of the features recited in the claims. Peter does not describe all of the recited features features for the reasons discussed above, among others. Therefore the anticipation rejection is erroneous and should be withdrawn, with respect to the amended claims.

Comments about the Obviousness Rejections

The August 22 office action asserts an obviousness rejection based on Peter and Tomasi (page 5), and another obviousness rejection based on Peter, Tomasi and Carau (page 6). Both rejections make statements about what the references allegedly teach. However, neither rejection appears to explain the differences between the claimed subject matter and the references, the proposed modification to the references necessary to arrive at the claimed subject matter or, most importantly, an explanation of why will one of ordinary skill in the art would be motivated to make the proposed modification. The deficiencies of these obviousness rejections demonstrate that they fail to comply with MPEP 706.02(j).

Further still, a rejection is not even stated with respect to claims 22-33, 58-65 and 68, on page 8 of the August 22 office action. The statement there is one simply of what Tomasi allegedly teaches. The meaning of this statement, if it is intended to be a rejection, and the statutory basis for any such intended rejection, is simply not understandable.

Due to the inadequate nature of these rejections, it is respectfully submitted that any further rejection of the claims should not be made final because the applicant has not had an opportunity to respond to a proper rejection in the first instance.

Obviousness Rejections

Despite the undeterminable nature of the obviousness rejections, it is clear that the Examiner intended that the references be combined.

A valid obviousness rejection requires a suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in

the art, to modify the references or combine them in a manner which teaches the claimed subject matter. It is respectfully submitted that there is no motivation or suggestion for such a combination.

As pointed out above, nothing in the Peter reference relates to controlling electrosurgical generators, or achieving the advantages and improvements of the present invention. Those features have been summarized above in conjunction with the anticipation rejection.

The Tomasi reference relates to a virtual keyboard for a computer. Nothing in the reference suggests any applicability to electrosurgical generators. Nothing in Tomasi relates to the issues associated with allowing a surgeon to directly control the electrosurgical generator rather than rely on an assistant to control the generator in response to voice commands, due to the fact that the electrosurgical generator and its typical control panel cannot be brought into the sterile field of the surgical site, as described in the Background of the application. Nothing in Tomasi suggests replacing a conventional electrosurgical generator control panel with a virtual control panel. Nothing in Tomasi suggests displaying the image on a portion of the generator housing. Nothing in Tomasi suggests separating the display surface structure from the housing, or making it attachable or detachable. No wireless link appears to be described in Tomasi, since the virtual keyboard remains a part of Tomasi's computer. Tomasi is not concerned with sterilizable or disposable structures. Tomasi does not appear to display functional information simultaneously with control information. Tomasi does not disclose or suggest multiple virtual control panels, any one of which is capable of control functionality of a single device such as an electrosurgical generator.

In short, the only suggestion of any connection between Peter and Tomasi is the applicant's own disclosure. Use of hindsight gained from the applicant's own disclosure is an inappropriate basis for combining references in an obviousness rejection.

Carau appears to offer nothing more relevant than does Tomasi, because both relate to virtual keyboards for computers. Carau appears to provide the keyboard for a personal digital assistant (PDA) while Tomasi appears to be more focused on a traditional desktop or laptop computer.

Carau does not supply any motivation or suggestion beyond that of Peter and Tomasi, and therefore cannot make up any deficiency in the combination of Peter and Tomasi, for purposes of a proper obviousness rejection.

The lack of motivation or suggestion in and among Peter, Tomasi and Carau to combine those references, indicates that hindsight was the basis for those combinations and the obviousness rejection. Hindsight is an inappropriate basis for rejection.

It is believed that the pending claims define nonobvious, patentable subject matter, and that the pending claims should not be obvious over the cited prior art.

Conclusion

As a result of the amendments and remarks set forth above, it is believed that all pending claims in this application are in condition for allowance. Allowance is respectfully requested. The Examiner is requested to contact the undersigned by telephone to discuss any issues which may inhibit the immediate allowance of the claims.

Respectfully submitted,

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